THIRTY-SIX YEARS

...AN...

ICE CREAM MAKER

RECEIPTS AND POINTERS.

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THIRTY-SIX YEARS
...AN...
ICE CREAM MAKER

BY VAL MILLER.

Receipts and Pointers.

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Introductory.

IN PRESENTING THIS BOOK I HAVE kept in view the adage "learn to walk before we run," and I have no explanation to make, except that all through my experience in the shop I have many times been quite puzzled to find out the reason why good men do not turn out successful. They have had no one to consult. No book information to be had. Hence, after many years accumulation of knowledge, through practical experience and mastering my trade, I feel conpetent to herewith present a guide for others. During all these busy years I have noted in my memoranda, pointers and the choicest of recipes, which I will now give in this little book; hoping the reader may be well pleased and profit thereby, I am

Sincerely Yours,

VAL MILLER,

Or

MAQUOKETA, DAVENPORT,

IOWA. IOWA.

A Talk with the Employers and Workmen.

I would like to say a few words as to the proprietor's side of the ups and downs of the wholesale and retail ice cream business, particularly as regards his relation to his employes. After work in the shop as a cub, then as a helper and later on as foreman, I went into business on my own account. After that my views as to the "boss" became somewhat broader than those of the average practical workman.

The "boss" may not do much manual labor, yet his task is hard at times and his patience tried to the uttermost. He has to stand the brunt of blame for everything that goes wrong and out of his pocket comes the cost of failures. For preference give me the shop the year round.

The road of the proprietor is rough enough—particularly if he has just begun to build up a trade—without his foreman or helpers giving him annoyance.

A favorite method of "working" the proprietor for a raise—practiced all too often by foremen and helpers alike, I am sorry to say—is to make application elsewhere, often at half a dozen places at once and when an exceptionally good offer is received come to the "boss" with it and be persuaded to stop in the old situation at the higher figure. Very often the man working this trick has no intention of leaving his old place unless he is kicked out and has secured his fine offer by representing himself to be more capable than he is in fact. He not only works his employer, but also fools and disappoints the man at the other end of the string.

Such a man should be let out the instant he tries to force the payment of more than he is actually worth, for sooner or later he will accept an offer of a dollar or two more a week—trusting to luck to bluff his way through in the new place—and let his former employer down at a time when men are badly needed and hard to get. No matter what your position, it is a good rule to have nothing to do with a man you can't depend upon.

Few proprietors need to be forced to raise wages when the workman is justly entitled to a raise. The demand for good men would influence them even if they are not already disposed to do what is right. Usually they know the value of their men and pay them accordingly. When a workman makes an improvement that leads to a saving in expense or is able to turn out a better class of

goods at the old cost and so increase the business, he is making extra profit for his employer and is justified in asking for more pay. How many employers would refuse such a man a fair increase? Not many. A few would, I know; but they are the kind that never can keep a good man, and they never get far along on the road to success.

The wise proprietor tries to keep in close touch with his workmen—His foreman particularly—at all times. Yet they sometimes find it hard to maintain pleasant relations with a workman, because there are some men who must be driven to prevent them grasping the reins themselves. Workmen make a great mistake when they fail to show respect for their employer. But some men have no respect for the "boss" who does not put them down and keep them down.

A model foreman is capable, alert and honest, and figures to save expense wherever he can; he is pleasant of manner, and considerate towards his employer and his helpers. Is any such man long out of a position? Indeed, no. But the evil tempered man, and the man who forgets that respect is due to his employer as his employer and that his men are not cattle, are seeking jobs on a sort of continuous performance plan; no one wants them for long at any price, no matter how capable they may be.

The proprietor who cannot go to his foreman for an explanation or to suggest improvement when

things go wrong and customers complain, is in a bad fix; and as he wants to stay in business he will get out of that fix the shortest way—by firing his evil tempered or disrespectful foreman. And he is justified in doing it on the shortest possible notice.

A workman sometimes wonders why he is dropped almost without warning, especially as he knows he is turning out goods that are up to the mark. If he would look into the matter of his temper or his attitude towards his employer, perhaps he would cease to wonder about the cause of his dismissal.

A mistake that is made by some employers is to hold back part of the men's wages when for one reason or another cash is a little scarce. Workmen never feel secure under such conditions, and they lose interest in their work. A regular pay day should be set, and by some means the money should be got together to meet the pay roll. The men may not have good outside credit to fall back upon. I have known a good many proprietors who would themselves go short at the week's end rather than let the men know that the little God of prosperity was in temporary hiding. And they were right. Others I have known borrowed to meet the pay roll or went short themselves to meet it rather than put their men to even temporary inconvenience about money. They, too, were right. If the men are to respect their employer, he must, if necessary, sacrifice something to his own self respect.

Another mistake sometimes made is to hold back a week's wages as a sort of string by which to tie men to their jobs. Men invariably resent such treatment and they are justified in resenting it.

On the other hand it is a bad practice to advance pay to workmen except in special cases. It helps to make men careless and improvident; and a man who is careless and improvident where his own interest is at stake is not likely to grow overcareful of the interests of his employer. In short the workman who is in constant need of assistance in the shape of advance pay, will do the proprietor more good out of the shop than in it.

Recommendations.

I have been an ice cream maker for thirty-six years, and during that time I have been given a number of letters of recommendation which have been of service to me in securing good situations at good wages. The following is a true copy of a letter given to me recently:

To Whom It May Concern:

Mr. Val Miller having been in our employ since the beginning of the present ice cream season, we take pleasure in recommending him, as a skilled ice cream maker, and can say that he has given entire satisfaction to us in every department of his work. He is leaving us entirely of his own free will, much to our regret, as our personal relations, with Mr. Miller have been harmonious and pleasant at all times.

As a good careful worker, and one skilled in all fancy work pertaining to the ice cream business, we can cheerfully recommend him to anyone wishing a good, sober, industrious man for any work along this line.

Respectfully,

The signature to this letter is that of a responsible and well-known firm—a firm that I am confident would not sign any sort of recommendation for a poor workman or for one "discharged for cause."

I believe that this letter alone would secure me a trial at least, if I were to apply where a workman is needed—for hasn't it the ring of sincerity?

Armed with such a letter any workman, young or old, is in a position to ask any manufacturer for a trial at good wages. But I believe that such letters, generally speaking, have to be earned.

Perhaps a few words about my experience will be of benefit to some of the young men who are starting in the business.

From the beginning I made it a rule to read trade papers—although we had none then directly in our line—and as far as I could I secured and read every book of information bearing on the subject. Thus I acquired quite an extensive reference library. When I found things that were new to me and seemed good, I copied into my pocket memoranda and tried them when I got the opportunity.

This broadened my knowledge of the business and also helped me in the experiments I made in my leisure hours in the way of new combinations. I studied hard, to the end that I might not be caught if some uncommon article were called for. The result was that I was able to make any article called for or produce a satisfactory substitute.

When my knowledge and experience made me the real boss of an establishment, I did not let a hint of the actual situation reach my employer nor the workman under me, except in cases where the repu-

tation and trade of the establishment were likely to be endangered if I did not assert myself. I made it a rule to give rather than to take, and never found that I lost anything by it.

Help under me were not asked to work overtime if it was possible to avoid it, but promptness was insisted upon. If overtime was necessary I took it upon myself as fas as I could, and if my help had to put in extra hours in spite of anything I could do, I invariably worked with them. And I never asked a workman—even a beginner—to do anything I was not willing to do myself.

My advise to the young foreman is above all things to be careful of his employer's property—machinery, tools and materials—and to teach his helpers how to improve their work and how to prevent losses through mistakes and waste. It pays to treat the helper as a man of intelligence and not as a machine. When an employer, through ignorance of the trade or inexperience, demands that a wrong idea be carried out, explain the matter frankly; then if he still insists, carry out the idea with the understanding that you do so on his order and responsibility. In nine cases out of ten a few proofs of his own lack of knowledge of the practical end of the business will increase your employer's confidence in you. In the tenth case, find a new employer rather than risk your own reputation beyond a certain point. But first be very sure that your employer is in the wrong. Don't ever get the notion that you

cannot be taught anything about your particular end of the business. In the ice cream business new ideas are always coming up—and they come sometimes from unexpected quarters. And when your employer—or even one of your helpers—does give you a good idea or pointer, be sure you let him know that you appreciate it. Through all keep a smile and a kind word for all, from your employer to the newest helper, and be upright and candid in every particular.

Then when you are leaving a situation for any reason, do not hesitate to ask for a letter of recommendation. It will be granted—and it will mean something.

A Word of Advice.

I find a great many fanatic ice cream makers following the woman's cook book style, trying to be wise by getting up new names for the same old article by simply blending a flavor.

For an example take the original Roman punch receipt, add wine enough to help disguise the punch, after it is frozen by beating it in. Then give it some big name and use a few more or a few less egg yolks to your cream, a blended flavor, a different mould, or mix colors and give this a big name. Now I suggest if you have an order for some new named article that you have not made, get all the ideas you can from your customer go ahead and make it and make it good. Flavor good and make it look nice. First impression when the lid is off goes a long ways to filling the bill. Though it may not be the same article; it is better in appearance than good eating goods, and a little different from the other article and the customer is well pleased, and so it goes on.

Now if you so desire, I claim you or I have the same right to add or take away, to better or to thin down, according to price and demand, so long as we use wholesome goods and call our make of goods by any name we see fit, and if this is a free country,

we should not be dictated to by some pure food man's hearsay decision. We need pure food men that are posted, practical workmen for the past fifty years.

The ice cream receipts have from time to time been imposed upon in its fine textures, smoothness, rich delicacy, its stand-up shipping qualities, not so much how cheap, "but how good," according to the price the buyer can afford to pay. Now the Food law is a little bothersome to us in some things. I feel if they were retired, practical ice cream makers it would not be so. Their ideas and knowledge would decide things differently and not be influenced by hearsay.

For I dare say if we could look into the White House kitchen, or all the pure food men's kitchens, on their shelves we most likely wound find a box of gelatine for almost every home in America fond of delicacies have and use it. Will their wives have to hang a card on the front door, "We use gelatine for our dinner desert," or, hang a card on the plate for their husband to read, "This contains gelatine, dear, look out!" Or if vaniline and cumin or cumarine is hurtful, then do not permit it to be used at all. Now days the price on an article most invariably tells the grade of goods used in its manufacture. My belief is let a man make an article as cheap as he pleases, or as good as he wants to, according to price; but fine him double if he uses an article injurious.

To Gain Trade.

One way to solicit trade is, for instance, to have several competitors, buy a pint of their ice cream, and have a chemist analyze it, giving the butter fat per cent. of the cream and articles used. Mark each man's analysis so you will know whose it is, but I do not recommend making any mention to your customers of the manufacturer's name. But make a list of the tests and ingredients, their standing quality as to purity and richness. Then you make and freeze an extra high grade, all-around cream. Now have the chemist test yours likewise, and put yonr test at the bottom of all with your name attached to it. Yours will be the far superior to all, and as all dealers want the best they can buy at an average price, you have a sure winner to talk on. Now to prove your statement have your customer allow you to send him a sample, convincing order. The cost of a test is usually 50c. to $1.00 and pays well for all trouble.

New Idea.

If you are having trouble in your cream raising, and if it tastes flat when frozen by the old style

machine, I recommend you to take three inches of one-half inch gas pipe with a one-inch elbow on it. Then take your freezer lid, have a hole drilled through the top under the cog-wheel near the cog-wheel post, then have the pipe screwed in and through long enough to take on a rubber washer and a nut, and the job is done. Have the elbow turned so as to strike the air when the machine is in motion and the air will beat down into the cream while freezing, which improves the flavor and the raise with a small expense and no danger of salt or water getting in, and the attachment is not in the way.

Office Needs.

First of all is money. It is up hill work to try a business without plenty of cash backing.

This list will be found helpful to the starter:—Desk, pens, pencils, figuring tablets, letter heads, printed envelopes, bill heads, statements, printed postal cards, bookkeeping books, day book, order book, tub tags, duplicate order book, business cards, advertising ice cream signs, bank books, cash and receipt books, chairs and broom.

NOTE—Commence business by taking an invoice from office to shop. Every article invoice twice a year. Also have a shop daily record book; keep tally of every article used, the amount, also each and every article that goes out, and the number of gallons of cream frozen.

Sample Opening Letter.

Have this letter or something similar printed on your advertising letter head sheets and mail them to parties you want to do business with:

The manufacture of ice cream and fruit ices has grown beyond the limits of the small maker to satisfy a varied and exacting trade, means a large expenditure for refrigerating plant and manufacturing appliances. We will make the best goods on the market. Realizing that the trade of eastern Iowa

and western Illinois has long needed a manufactory to produce ice cream and ices in large quantities on short notice, it gives us pleasure to state that we are now ready to cater to this business. We expect to handle various individual moulds and fancy shapes, and will have a large line to select from.

We trust that we may be permitted to figure with you on the approaching season's business. Our reputation for square dealing will assure you fair treatment and courteous consideration.

May we expect to hear from you soon.

Very respectfully,

Sample of Duplicate Order Sheet.

TERMS CASH

Davenport, Ia.,.....190....

.....

.....

Bought of ...

V. MILLER & CO.

Mfrs. of High Grade

ICE CREAM

.....

.....

.....

Orders for moulded work should be sent in the day before wanted.

	Gal. Vanilla				
	Gal Strawberry				
	Gal. Chocolate				
	Gal. Lemon				
	Gal. Individual Moulds				
	Gal. Fruit Ices				
	Gal. Brick				
	Gal. Yankee Rolls				
	All bills payable every Monday				

No moulded creams can be returned. Always repack your ice cream morning and evening, first leaving off the water, using 2 quarts of ice cream salt to a 5 gallon packer of ice in packing.

Sample Postal Card

To be mailed in a letter for your customer's use.

Order a day ahead on this card and avoid mistakes. Safest and easiest way.

Date ..... 190.....

V. MILLER & CO.

Please ship .....

(Say what day you want them shipped)

By .....

(Say by what Express or R. R. Co.)

Duplicate .....

[Say when we may ship again]

.....	Gallons,	Vanilla
.....	"	Strawberry
.....	"	Chocolate
.....	"	Pineapple
.....	"	Lemon

.....

.....

.....

This order is from

.....

[Don't fail to sign your name]

Town .....

State .....

All orders for Brick, Individual, Moulds, Fancy Shapes furnished on short notice.

Sample of Envelope Shipping Tag for Tying on Ice Cream Tubs, Etc.

BILL INSIDE THIS TAG.

FOR .....

.....

.....

FROM

V. MILLER & CO.,

MANUFACTURERS OF

PURE ICE CREAM

311 WEST 3rd STREET

Packer No. DAVENPORT, IOWA.

ADDRESS .....

.....

.....Gal. Ice cream .....Qts. " .....Pts. "	No. Packages .....

MOULDS	NO. PACKAGES
.....1 Gal. Bricks	.....
.....3 Qt. "	.....
.....2 Qt. "	.....
.....3 Pt. "	.....
.....1 Qt. "	.....

DELIVER

Day of Week .....

Time of Day .....

Date of Month .....

FLAVORS .....

.....

Demonstrating Ice Cream.

Advertise outside of your place of business. Find some store that ladies and children frequent and get the proprietor to allow you the privilege to advertise by giving away sample ice cream in some neat form with your ad. It pays.

Postal Card Reminder.

M———————————

I am at a loss to know why I am not receiving a share of your patronage, if there is any reason I should be pleased to know the same. Please favor us, as we are making special efforts in fine goods. Our phone is No.——

Yours,

———————————

Sample Envelope.

Return
in
Five Days
to

V. Miller & Co.
Wholesale Dealers in
ICE CREAM AND FRUIT ICES
108 E 5th St. DAVENPORT, IA.

Sample Invoice or Bill Head.

Davenport, Iowa,..... 190.....

M.....

.....

IN ACCOUNT WITH

V. Miller & Company

Manufacturers and Shippers of High Grade

Ice Cream and Fruit Ices

108 East Fifth Street

Sample Letter Head.

OFFICE AND FACTORY
311 W. THIRD STREET

OLD 'PHONE 319 and 1475 Y
NEW 'PHONE 323

V. MILLER & COMPANY

MANUFACTURERS AND SHIPPERS
OF HIGH GRADE

ICE CREAM AND FRUIT ICES

All Orders for Brick, Individual Moulds, Fancy Shapes Furnished on Short Notice : : : :

Davenport, Ia.

To Insure Perfect Work Send all Fancy Orders in a Day Ahead : : :

Ice Cream Signs for Customers.

It is a good idea to have card signs size 11x14 in., red, white, blue and yellow. Send out a different colored sign each month or several, so they may have a change or replace soiled one. This not only pleases, but advertises your cream.

Articles Needed in the Shop.

1 machine freezer, 10-gal. size.
2 freezer cans.
2 can dashers.
2 freezer tubs.
1 freezer lid.
1 seven and one-half horse power motor or gasoline engine, equivalent power.
2 storage boxes for 5 gallon cans of ice cream.
1 ice storage box—size given in this book.
2 salt boxes or barrels.
1 mixing ice box.
1 ice crusher and box for underneath.
1 mixing cream vat.
1 table.
1 water heater or gas or gasoline stove.
1 washing, water box.
Several different sized wooden paddles.
Several different sized spoons.
1 2-quart Farina cooker.
Belting for the machinery.
1 large scoop shovel.
1 small scoop shovel.
4 heavy galvanized iron scoops for salt.
3 or 4 hard wood stick punches 3½ feet long, square or round for ice chugging.
1 strainer to fit the freezer can.

1 7-gallon pail to measure cream in.
1 ice axe.
2 pair ice tongs.
1 pair can tongs.
1 ream white wax paper.
1 ream 6-inch roll parchment paper.
1 knife.
1 pair scissors.

Another Line of Shop Wants.

1 barrel Michigan Carbon Works Gelatine. No other.

Gallons of Cream.
Condensed Cream.
One-half gallon lemon flavor.
4 ounces bitter almond.
½ quart orange flavor.
1 quart pineapple.
One-half quart maple.
1 pound burnt sugar, color.
1 barrel vanilla flavor, The Boevner Fry Co, Iowa City, Iowa.
Arm and Hammer Soda.
One-fourth pint Pistachio flavor.
1 gallon strawberry flavor.
One-fourth quart banana flavor.
Car load Avery ice cream rock salt. No other. From Avery Rock Salt Mining Co., Avery Island, La.
Ice—Put up your own.

Colors.

There are no colors that I have ever tried that has filled the bill so well as Joseph Burnett's, 36 Indiana St., Boston, Mass.

1 lb. chocolate brown.
½ lb. sugar red.
1 lb. brilliant rose.
¼ lb. Leaf Green.
¼ lb. lavender.
¼ lb. scarlet.
¼ lb. blue.
½ lb. Orange.
½ lb. cream color

Various Moulds.

4 1-quart heart moulds.
4 1-quart Yankee moulds.
1 heart center for the 1-quart moulds.
1 round center for the Yankee moulds.
1 division tin for 2 colors for the round moulds.
1 3-division tin for 3 colors for round mould.
12 1-quart brick 1 lid moulds.
2 2-quart brick 1 lid moulds.
6 1-gallon brick 1 lid moulds.
2 4-quart sectional brick moulds.

Individual Moulds.

6-7 to the quart brownies.
6-7 to the qnart roses.
6-7 to the quart crysanthemums.
6 7 to the quart lilies.
6-7 to the quart automobiles.
6-7 to the quart apples.
6-7 to the quart peaches.

Can Packers.

These ice cream cans must be duplicated in number with packer tube, which will be selected suitable by the dealer.

1½ dozen one quarts.
2 dozen two quarts.
2 dozen four quarts.
¼ dozen six quarts.
1 dozen eight quarts.
100 5-gallon cans.
4 10-gallon cans.

Brick and Individual Cans and Covered Lid Packers.

2 2–quart.
2 4–quart.
2 6–quart.
1 10–quart.

Fruits and Nuts.

5 lb. red French crystalized pineapple,
5 lbs. white French crystalized pineapple.
5 lbs. French crystalized red cherries.
5 lbs. Angeleque (green)
5 lbs. Almonds.
5 lbs. Almond paste.
Currants, seeded raisins, maroons.

It is also well to carry in stock pint and quart ice cream paper pails.

Size of a Suitable Building for an Ice Cream Factory.

Suitable to turn out 3 to 4 hundred gallons a day. Should be about 60 feet deep, 24 feet wide with about a 15-foot ceiling. To economize room there should be about one-third of the back part built up with a platform floor 7 feet high on both sides of the room, one-half to be used for storing salt, the other for packers, etc.

There should be two front doors, one for the office, the other a kind of hallway to the shop.

Do not take up to much room for the office. There should be a side door at the rear of the work-shop and a back door, the side door for loading and unloading; also plenty of light.

The front half of the shop should be cement floor, draining to all sides with a nice even slope, the drainage leading to the sewer.

Placing Machinery.

As you enter the shop from your office, on the right side of the building measure 3½ feet from the door and first place your mixing box; second measure 3½ feet and place your ice cream

freezer in the cement floor, or if preferable after you line up with the overhead pulleys; 3rd measure 2 feet, place your small ice mixing box 1½ feet above the floor, then measure 3 feet above it and place a salt box to hold a hundred pounds of salt; 4th, measure one-half feet and place your ice crusher over a heavy 2x8 board catch-crushed ice box; 5th, measure 1½ feet and place your storage ice box; 6th, build the ice box with a room under it so you can walk under the floor, this room being used for storing cream you wish to keep for stock; 7th, have a door leading out of the ice box so you can hook out a chunk of ice that it may slide direct into your ice crusher; 8th, place your motor power on the opposite side of the room from your ice cream machine, about 6 feet from the ceiling on a stout iron, bracket shelf, having your motor box and trigger for turning on and off the power placed on the wall by the ice cream freezer.

Placing Ice Cream Storage Boxes.

These, say two in number for five gallon cans, should be about the center of the shop and set down in the floor about 1½ ft., with water escape to the sewer.

On the opposite side of the room from the freezer place another 5 gallon storage ice cream box and one for 2 and 3 gallon cans close to the wall, water escape to the sewer, and place them in the floor according to height, which saves labor of lifting cans so high, also saves ice.

Shelving.

Plenty of shelvings partitioned off for small cans, extracts, moulds, etc , should be made.

The table can be placed in the front of the shop between the two doors against the office partition.

Salt.

It is quite handy to have a box or barrel for salt at each end of your ice cream storage boxes this is used so often and saves time and labor.

Mixing Box for Cream.

For 100-gallon mix after it is frozen.

This box should be made of galvanized sheet iron 4½ feet long, 2½ feet wide and 2 feet 4 inches deep. Now this should have an outside jacket—wooden box—leaving a space underneath and on all sides of about 7 inches, placing the galvanized box so it will be 2 inches lower in front than on the back so as to assist the flow of cream when drawing. Have a pipe from the mixing box through the outside box and to this have a molasses barrel with shut off faucet, also have a let-out to the jacket box for water escape. Also have a lid to cover your mixing box of the same material, so you can at any time use ice on the sides and on top for cooling and keeping.

Stock Cream Storing Cans.

These should be made of galvanized iron with lids to project over with a one-inch rim. The bot-

tom should be somewhat on the funnel style to allow the cream, when drawn, to flow well and drain good.

Size for a 20 gallon can—36 inches deep and 22 inches wide, round or square.

These cans should set in a wooden jacket box on the same principal as the "mixing box," also faucet at the bottom. In placing them set them high enough to allow a 5-gallon pail to be placed under the draw-off faucet.

Storage or Refrigerator Ice Cream Boxes.

Size suitable for 5-gallon ice cream cans, 5½ feet long, 3 feet wide, 26 inches deep. It should be made of matched lumber and lined with galvanized sheet iron with an outlet in the center of the bottom to allow the brine to escape.

If so desired you can buy 5-gallon, perforated, ready-made can jackets and place these about 3 inches apart, nailing them to the floor of the box. They are time savers. When you lift out a 5-gallon can of ice cream the place is held vacant by the jacket for the next can to be stored.

For 3 and 2 gallon refrigerator boxes make them on the same principal as the 5-gallon size, according to the number of cans to be stored. A good size usually is for about 12 3-gallon and 6 to 10 2-gallon size.

Transferring.

When your freezing capacity is justifiable it is a labor-saving plan to have your 5-gallon cans iced and salted in your storage box and transfer your cream direct from the freezing machine can into the storage box cans doing away with the 5-gallon packer tubs.

Size of Pulleys for Speed Required.

I will give you a very correct explanation to go by, which will save considerable time and bother in figuring out and changing pulleys, etc. If you have a 250 volt, 7½ H. P. motor with a 5-inch drive pulley, then have your drive pulley running your shafting 38 inches in diameter; have your drive pulley that runs the belt down to the machine freezer 28 inches, and you will come near having a speed that will give your ice cream dasher 155 revolutions to the minute.

To Enlarge a Pulley.

Nail one-inch slats around it bearing in mind when finished you have added two inches to the pulley and about 10 extra revolutions to the minute. This works well, saves buying and exchanging. If more speed is needed use 2x4 peices, flat or edgewise. This, after nailed on, must be plained on the edges.

Belting.

Always use as wide belting as the pulleys are, and the belting will wear longer than the narrow.

Ice Box.

This can be built to suit your fancy, either common lumber or matched, either single, papered, or double and packed walls. I would suggest not to make it too small. Say to hold three tons of ice. A good size is as described:

Ice storage box—13 feet high, (6 feet for the lower part, 7 feet for the top room for ice), 10 feet wide and depth about 6 feet, makes a nice size box.

It pays to put up your own ice.

Keeping Your Cream Sweet.

If you find you are overstocked with cream and you fear you are going to have some sour on you, take one-half pound salt, mix with two large pails of ice and pack it around your cream so as to only freeze it a little next to the can. In the evening stir the outer cream into the center, and a portion of the frozen will float to the top and assist in keeping the cream. This will immediately dissolve when put into your mixing can with the sugar and hot cream. The gelatine is dissolved in, or, if mixed with other cream, cold. Or if you expect to use the cream the next day stir in one tablespoon of Arm & Hammer soda to each gallon.

Temperature for Best Results in Freezing Ice Cream. No. 1.

10 GALLONS.

Put your freezer can in the freezer tub and place your strainer on it. Strain in your mixture; put in the dasher; put on the lid; place and fasten the dasher post all complete to start up. Now crush 120 lbs. of ice fine, or nine large scoop shovels full is equivalent. Fill your freezer three-fourths full of the ice, then throw on one and one-half lbs. of salt. Now finish filling on ice to cover the lid well and and throw on top one and one-half lbs. of salt. Start your machine to running.

Time your batch by the clock. When the ice works down even with the lid add a scoop more ice and place on top one and one-half lbs. salt. In about four minutes add another scoop of ice and one and one-half lbs salt. In about four more minutes repeat one scoop of ice, one and one-half lbs. salt. When the freezer has run 14 minutes it is done freezing. Now you have used five batches of salt, 1½ lbs. each, 7½ lbs. in all.

The cream should not be too hard but rather a little soft frozen, and should be up to the can lid, or 10 gallons out of 5 gallons in the receipts calling for 5 gallons, or 10 gallons frozen from 6½ of the condensed cream mix. (Note receipts elsewhere in this book.)

Wholesale, Continuous Freezing.

There is more money in continuous ice cream freezing than freezing one batch and emptying out your ice, etc.

TO CONTINUE FREEZING.

After freezing, as in No. 1, take the freezer from under the machine, kick out the plug so as to drain off the brine, then your can will not float up out of its socket. Have your other freezer filled with cream all ready to attach on and as the freezer tub is empty, ice and salt up the same as in No. 1. After this one is frozen you now have a starter. So keep going each freezer in its correct turn after the ice cream has been transferred.

Now comes the first freezer's turn to go on the machine, or No. 3, and as it is about eight-tenths full of ice and salt you put in your plug and start up the machine. Time your batch. Now fill up with ice, then add 1½ lbs. salt, and run 5 minutes. Repeat the ice and salt, run 4 minutes; repeat ice and salt, running 4 minutes, and repeat ice and salt using each time the same amount as mentioned, run 12 minutes. If the cream is not up run 14 minutes in all, and so continue freezing.

You notice it takes less ice and salt after starting the two freezers and should freeze two minutes quicker than the first two frozen.

NOTE—The above receipt is for new cream just received, the hardest cream to freeze. If you are going to freeze old ripe cream, say 4 to 6 days old, 20 per cent. butter fat cream, you can commence to use 4 ounces more salt each time and freeze quicker with the same raise or doubling up of cream, and if you get a full freezer each time, try ½ pound more salt, but the last amount is usually the limit. I have had cream so heavy in butter fat and age, that I could force it up frozen in 9 minutes. But 12 minutes is usually the run on time.

P. S.—The older the cream the quicker it can be frozen and the more salt can be used. New, thin cream is the reverse.

Transferring Ice Cream.

To transfer ice cream from the freezer to the cans, a good article to use is a 2-quart tin stew pan about 4 inches deep. Always have your cans packed with ice and plenty of salt, not less than 10 minutes before filling so they will be chilled up. Throw ice about half the way up around your can, then ¾ lbs. salt, then ice up within one inch of the top and repeat the salt. After it is filled with ice cream cover over the top with more ice and ½ lb. of salt.

Ice Cream Mixtures.

FIRST—PLAIN FOR FREEZING AND MOULDING.

This cream is best adapted to the retail business on account of moulding in fancy forms, and I will give it in two receipts both of which are commonly used, but I prefer the second receipt, and above all receipts I prefer the condensed cream both for retail and wholesale trade, for it is a delicious eating cream that I find suits the public and not only keeps better, but is always smooth and never gets icy by standing. It does not need the care that all other ice creams do.

No. 1 Mixture—Plain cream—5 gallons 4 days old cream, 6 lbs. granulated sugar, 3 ounces good vanilla. Will freeze up to 10 gallons.

No. 2 Mixture—5 gallons 4 days-old cream, 7½ lbs. sugar, 7 ounces gelatine, 4 ounces vanilla.

No. 3 Mixture—4½ gallons cream, 7½ lbs. sugar, yolks of 24 eggs, 4 ounces vanilla.

No. 4 Mixture—4½ gallons cream, 7 lbs. sugar, yolks of 12 eggs, 4 ounces gelatine, 4 ounces vanilla.

The above creams are all good. The use of the egg whites are left out because they do not freeze up so good and weaken the keeping quality of ice

cream. Do not fear detection using eggs, they make a nice flavored cream and combine well in the mixture, so well as to give a nice color to the cream. For some city trade it is preferable to most any other cream.

Cheap Mixtures.

There are numerous kinds of preparations on the market but nothing that can perfectly fill the place of cream. They act principally as smoothers and are principally made up from these different articles or a combination: English powdered arrow root, flour, ground gelatine, gum arabic, sago, tapioca, iceland moss, glycerine, etc.

Cheap ice cream recipe—2 gallons cream, 2 gallons milk, 7 lbs. sugar, 24 eggs and flavor. Beat the eggs, then beat them into the milk over a fire. Stir all good until, when you stick a knife blade in and on drawing it out, you can see a coating on the blade thick like thin whitewash, then it is done. Next put the sugar in the cream, stir good, then mix all your other ingredients, cool it and freeze. Will freeze up close to 10 gallons.

To Dissolve Gelatine.

Always save out of your measured up batch of cream or milk from 2 to 3 quarts to melt the gelatine in. Soon as thoroughly dissolved do not cook it any more, or it sometimes curdles.

No. 2—3 gal. milk, 1 gal. cream, 1½ gal. condensed, 8 lbs. sugar, 12 oz. gelatine, 4 oz. vanilla. Take 3 quarts of the milk, stir into it the gelatine, set the can in a pan of water over heat to dissolve, stirring at times. When the gelatine mix is dissolved, mix all the other ingredient in, then strain and freeze.

No. 3—2½ gal. cream, 2½ gal. milk, 7½ lbs. sugar, 4 oz. vanilla, 10 oz. gelatine.

No. 4—2 gal. milk, 1 gal. condensed cream, 2½ gal. cream, 8 oz. gelatine, 7½ lbs. sugar.

No. 5—1 gal. condensed cream, 1 gal. water, ½ lb. flour, 3 gal. milk, 7½ lb. sugar, 3 oz. vanilla. Mix flour in the water, stir it good over the fire until it boils, then mix all, strain and freeze.

No. 6—5 gal. milk, one-half lb. flour, 8 lbs. sugar, flavor. Work as number five.

No. 7—5 gal. milk, 8 lbs. sugar, 12 oz. gelatine, yellow color to suit, 4 oz. vanilla, 2 tablespoons Arm and Hammer soda.

Best Ice Cream for Wholesale or Retail.

This receipt I now write, I find it to be superior to anything I have ever made or ever found anywhere; besides, it has always a solid, firm, good body, fine rich flavor, and never needs any rebeating. It never gets icy. Lay aside your prejudice and give it one fair trial. It suits everybody's taste.

CONDENSED CREAM MIXTURE.

4½ gal. 4-day old 20 per cent. cream, 1 gal. condensed cream (Borden's Peerless Brand, New York) 7½ lbs. granulated sugar, 7 oz. gelatine (Michigan Carbon Works, Detriot), 4 oz. good vanilla (Boener Frys Bourbon Brand), 1 tablespoonful A and H soda, Iowa City, Iowa. Save out two quarts of your cream and melt your gelatine in it in boiling water bath, mix your sugar and the 4 gallons of cream, stir until dissolved, then stir in your one-half gallon with the dissolved gelatine, then your one gallon of condensed cream, then your vanilla, then your soda, strain and freeze.

The soda acts as a sweetener, lightener and a preventative against cream taking any bad flavor, especially in long storage in the cans.

The above batch will freeze up full 10 gallons. Do not freeze it to stiff, better to be a little soft rather than too hard, as it gives the cream a chance to ripen up when repacked, which should be done as soon as frozen.

Wholesale Mixture for Factory Convenience.

Two Batch Size—9 gal. cream, 2 gal. condensed cream, 15 lbs sugar, 14 ozs. gelatine, 8 ozs. vanilla, 2 tablespoons, Arm & Hammer soda. Keep out one gallon of the cream to melt up the gelatine in.

Three Batch Size—13½ gal. cream, 3 gal. condensed cream, 22½ lbs sugar, 21 ozs. gelatine, 12 ozs. vanilla, 3 tablespoons soda; keep out 1½ gal. of the cream to melt the gelatine in.

Four Batch Size—18 gal. cream, 4 gal. condensed cream, 30 lbs. sugar, 21 ozs. gelatine, 4 spoons soda, 16 ozs. vanilla.

Five Batch Size—22½ gal. cream, 5 gal. condensed cream, 37½ lbs. sugar, 35 oz. gelatine, 20 oz. vanilla, 5 spoons soda; this last will freeze up 50 gallons of ice cream.

Now for 100 gallons of frozen cream double up the above amount which will make 10 batches of 10 gallons each when frozen, or the 100 gallons.

If you want a 200 gallon mixture, multiply each article in last receipt by four, and you will have it. Before mixing do not forget to keep out two quarts of cream to each 7 ounces of gelatine to be dissolved.

Pure Food Law Cream.

You can make a condensed cream or evaporated cream by the receipt given in this book, and by adding one gallon to four gallons of cream will bring the butter test up higher and make a better ice cream than all plain cream. Also it will stand up better, to use 2 of condensed cream to 3 of cream, 7½ lbs. granulated sugar, 3 oz. vanilla. Do not freeze it or pack it too hard.

Pure Food Law Receipt.

In this receipt so as not to lower the test of butter fat in cream, make condensed or evaporated cream from the same cream you intend to freeze, using nothing but cream boiled down so that 5 quarts is only 4 quarts when done. Now the mix is as follows: 4½ gal. 20 per cent. cream, 1 gal. of your evaporated cream, 7½ lbs. granulated sugar, 3 oz. vanilla, 3 oz. best gelatine; mix as usual and freeze.

Now a suggestion if there are any objections to the gelatine. If the pure food law allows the cheese makers to use liquid rennet in cream, I ask could they prohibit us from using the same thing in cream. Just because one man is a cheese worker the other an ice cream worker and both goods are to be eaten, I claim no just law could be enforced, so I will suggest about 8 tablespoons of liquid rennet could be used in one gallon of luke warm cream, the cream to be taken from the batch and frozen in place of a filler, thickener, or gelatine.

Imitation of Pure Cream.

There is nothing that can fill the place of cream, but the following receipt will come as near to doing it as any article I have tried:

5 gal. new milk, 8 oz. English Powdered Arrow Root, 4 oz. gelatine. Take one quart of the milk and dissolve the gelatine in it as in previous receipts, and one quart to do the arrow root like-

wise. Now this should have a little yellow cream color added and if you do not care to use color, substitute the yolks of 10 eggs beaten, then adding to it the arrow root. While hot mix all extra good and strain. Use as cream.

To Work Up Turned or Soured Cream Into Ice Cream.

To five gallons of turned cream use six large tablespoons soda, stir it well in, then add all to five gallons of sweet cream. It can not be detected. But do not use any of this to melt gelatine in as it will curdle. Use more or less soda as to the sourness of cream; if too rank let set one-half hour and skim one-inch off the top.

To Make Condensed Cream.

Take for example five gallon cream not too old, put it in a kettle over the fire, stir good and try often by sticking a case knife blade into it, and on drawing it out when it is coated over like thin whitewash, it has cooked enough. Now have a 10-gallon can in ice; pour in the cream and stir brisk and good, and it will soon cool up for use. The quicker cooled the better flavored cream you will have.

The above you will find extra good to add to thin cream to bring up the body.

Another Condensed--5 gal. cream, 8 oz. English arrow root.

Another—5 gal. cream, 8 oz. English arrow root, 4 oz. gelatine.

Another—5 gal. milk, 10 oz. English arrow root, 6 oz gelatine, color or no as you please.

A Cheap Grade of Ice Cream.

4 gal. milk, 1 gal. water, 4 oz sugar, 10 oz. arrow root, 6 oz. gelatine, little color, dissolve and work as in the first receipt.

In making condensed cream on a large scale it must be done by steam, the cream well cooked in cans brim full and soldered up hot or it will not keep. The condensed cream receipts I give will keep longer than plain cream if kept in ice, as you do your cream. I have kept it a month not sealed. Try to make your own condensed.

Chocolate Paste for Ice Cream.

This chocolate works nice for candy ice cream, and thinned down for the soda fountain or bake shop. A fine article can be made by this receipt, also by using cocoa instead of bitter chocolate, as to your fancy. I prefer the following formula:

Take 2½ quarts water, 4 lbs. bitter chocolate, 8 lbs. granulated sugar. Take 1¼ quarts of the water, let it come to a boil; have the chocolate shaved fine and stir it in until it curdles up thick like corn meal, now add all the sugar and stir good until the batch works down smooth; then add the other 1¼ quarts of water and set all on the fire; stir good until it comes to a simmer. Pour into a can or jar for future use.

Tutti Frutti Mixture for Ice Cream.

Example: 1½ lbs. white crystalized pineapple, 1½ lbs. red crystalized pineapple, 1½ lbs. red crystalized cherries, 2 lbs. angeleque, cut all in small pieces, mix up and put them in a jar. Take one-dalf pint of any mild wine, pour it over and shake all up good and set aside for use.

Pistachio Paste for Ice Cream.

Have a large bowl or pan, place in it 1 lb. cut fine almond paste, ¼ lb. glucose, rub all smooth; add ¼ pint simple syrup, and enough green color to give it a dark hue; mix smooth. Jar away for use.

Strawberry--Color and Flavor.

Take a 4-quart bottle, put into it red color liquid 2 ounces, add to this 3 quarts good strawberry flavor, shake well. Now have a three cornered piece cut out of your bottle cork, lengthwise, so you need not remove the cork but simply dash out your flavor and color, 5 to 8 dashes being sufficient for 5 gallons of mixture. Try it first as flavors vary in strength; stir up your batch. It should be just the right color and just so you can taste the flavor nicely, if not so, add or diminish it correctly and you then have it ready for future use. See strawberry ice cream.

Have filberts roasted for ice cream, especially for the New York, and rolled fine; keep in a tin box. All nuts should be rolled or chopped fine for cream use.

No. 1 Chocolate Ice Cream.

For 10 gallons after it is frozen—Take your amount of mix to be frozen and put it in the freezer. Add 4 oz. vanilla, 1 quart of the chocolate paste (mentioned before.) If you want it extra dark you must use a little of Ottens chocolate color. Place in your dasher and freeze as for plain or vanilla cream.

Tutti Frutti Ice Cream.

As in above (No. 1) add 2 quarts of the tutti frutti preparation and freeze as for vanilla.

Strawberry Ice Cream.

As in above (No. 1) add 2 quarts of prepared strawberries, 6 to 8 dashes of the prepared strawberry flavor (before mentioned.) Freeze as No. 1. If you use fresh berries add 1½ lbs. sugar and mash all good before adding them.

Fruit Ice Creams,

Work as for strawberry; color to suit the fruit.

Fancy Ice Creams.

These you seldom get an order for more than one, 2 to 4 quarts, so I will give you the quick method of making them and you can double up the quantity by multiplying the quarts and the amount accordingly when necessary, using frozen vanilla ice cream to make them.

New York Ice Cream.

Take 1 quart vanilla ice cream, beat up the yolks of 2 eggs a little with 2 teaspoons' fine sugar; beat this into the cream with 1 heaping tablespoon of roasted filberts fine cut; flavor with one tablespoon of good brandy; beat all to mix; then pack as any ice cream.

Tutti Frutti.

One quart ice cream, 2 heaping tablespoons tutti frutti mixture; beat in and pack in ice.

Chocolate.

One quart ice cream beat in 4 tablespoons of chocolate paste and pack away in ice.

Strawberry.

1 qt. of ice cream, a dash of prepared flavor (mentioned before), 4 large tablespoons of prepared strawberries; proceed as before. Or any kind of fruits may be worked in on the same method.

Lemon Ice Cream.

If for wholesale use the best lemon oil sparingly and a little yellow color.

Orange ice cream, if wholesale, the same as lemon.

If retail, take either oranges or lemons, grate a few of the yellow outside rind, put it in a mortar with granulated sugar enough to grind and rub it down good, then a little alcohol and water mixed;

rub good, then strain it through a cloth and bottle for use.

Lemon Cream—1 qt. ice cream, 2 tablespoons of the prepared flavor above, a little yellow color, juice of one lemon, juice of one orange; beat all and pack.

Egg Nogg.

1½ qts. whipped cream, 12 oz. powdered sugar; whip the cream stiff stir into the cream the sugar; 1½ pt. egg yolks, 10 oz powdered sugar; beat the eggs good with the sugar over the fire, set off and contiuue to beat, off and on, until cold. Then mix the two together, stir in 3 oz. good rum and a dash of good nutmeg powdered fine; pack away in plenty of ice and salt to harden before sending out. The above usually makes about one gallon when finished.

Orange.

1 qt. ice cream, orange flavor, juice one lemon, juice one orange, orange color—red and yellow makes orange color.

Other fruit creams are made on the same principal, chopping up the large peices of fruit, mixing a little sugar to sweeten, and color as to the fruit used. If you want a gallon, multipy all by four; if you want five gallons, multipy by 20 and cut your ice cream measure about two to three quarts short.

If you want to freeze five gallons for ten gallons, mix the ingredients, add them and freeze.

Maple Moose.

One quart ice cream, burnt sugar to give it a dark wine color, one-half teaspoon maple flavor according to strength, yolks of 2 eggs; beat the egg yolks with 2 tablespoons sugar; then beat all into the quart of cream and pack.

A good maple syrup to have on hand—10 lbs. maple sugar, 1½ qt. water; dissolve completely by heat but do not boil it, then add 2 lbs. of glucose and stir extra good, then strain it for use. When done it will register about 220 degrees. The glucose will keep it from graining.

Frozen Puddings.

There is such a great variety of these goods and, I find most every city that I have worked in vary somewhat, as to the styles and make up. So I will give a few choice formulas and ideas as follows:

CHESTERFIELD.—1 quart condensed ice cream, any ice cream can be used, ½ lb. maroons, 1 qt. of whipped cream, 6 oz. powdered sieved sugar, 4 gills nayan, yolks 3 eggs, pinch nutmeg, stir the whipped cream after beaten into the ice cream gently, beat the eggs with 3 table spoons of powdered sugar then mix all gently and put into a round mould to harden in ice and salt, any mould may be used. To take out draw a little water on and turn the pudding out into packer. Plenty of ice and salt.

Supply sauce for puddings if called for, but never push them as it is hard to get the price for the extra trouble.

SAUCE FOR ICE CREAM PUDDINGS.—Take a small amount of cream beat up say 4 eggs to the qt. of cream, ½ sheet gelatine, 4 table spoons sugar, 2 table spoons vanilla, mix all in a farina boiler and cook until a little thick, pack in plain ice.

Some use whipped cream sweetened and flavored for sauce. It saves time and is very nice, also it can be colored a delicate shade. Pack in ice, no salt.

APPLE ICE CREAM PUDDING.—Cook the desired amount of apples pared and cored to a thin jelly, strain by rubbing through a fine sieve, beat it with sugar to sweeten, ½ lb. powdered sugar to each lb. of apple pulp, beat this into a hard frozen ice cream using plenty, but do not forget to pack it well with plenty of ice and salt and at times open it up and give it a beating to keep down the grain. This serves well with the whipped cream sauce.

Either pack the pudding in the mould or in the ice cream can as wanted.

LA MALANAISE.—2 qts. cream, frozen, beat up the yolks of 4 eggs with 4 spoons sugar and teaspoon of extract of nectarine, 1 pint of strawberry jam rubbed through a coarse sieve, now beat all into the ice cream, cut into small dices, 2 oz. red and 2 oz. white pineapple crystalized, 2 oz. angeleque, stir this in and freeze by packing in ice and salt.

DUCHESS.—1 qt. condensed ice cream, any ice cream will do, 1 pt. frozen orange ice, 2 oz. fine cocoanut, ¼ lb. roasted filberts, let come to a boil, ½ pint cup of cream, pour over the two nuts, let set awhile to soften, then strain off the cream and use only the nuts, run it through a fine cutter. Beat everything together and freeze in a mould. Take out and repack. Paint top with thin burnt sugar after it hardens up.

VICTORIA.—1 quart condensed ice cream, 1 pint whipped cream, 4 ozs. powdered sugar, 4 tablespoons any good wine, one-half lb. angel food cake, 4 ozs. marischino cherries, one-half pt. raspberry jam.

If the raspberry jam is stiff enough cut it into small pieces and stir into the ice cream.

Beat the whipped cream, add the sugar and also gently stir it in, then the wine.

Dissolve the gelatine in just enough water to cover it, strain and beat it in gently.

Cut 4 oz. cherries and stir in, cut the cake in as thin slices as possible, line your mould and fill with your mixture and freeze, then repack.

LA FRANCAISE.—1 qt. ice cream, 8 ozs. powdered sugar, 6 yolks of eggs, 4 tablespoons vanilla, 1 teaspoon cinnamon flavor, ⅛ pint chocolate paste, 4 oz. blanched almonds, beat the eggs and powdered sugar a little and beat into the ice cream, the vanilla also the chocolate, cut fine the almonds and finish, then mould in an oblong box mould. Plenty of salt and ice and repack.

Mould in long narrow mould to be cut in square blocks.

LAKINNAIRD.—1 qt. ice cream, 1 pint milk, ½ lb. maple sugar, 2 large tablespoons of English arrow root, ¼ lb. pecan goodies, 2 yolks of eggs, break fine the maple, add to the milk over the fire until dissolved, beat the eggs a little and stir in, beat good, cool up in ice, cut the nut goodies fine and

beat in, then beat all together, fill a round flat mould leaving top space to ice with half pint whipped cream. Mould and repack.

MONTROSE.—2 qts. of ice cream, 1½ pints milk condensed or milk, 8 oz. powered sugar, ¼ oz. gelatine, 4 egg yolks, 4 spoons vanilla, 2 lemon extract, one half lb. figs, 6 oz. sugar, boil the figs in water to cover them until tender, rub the soft pulp through a colander, beat the eggs and sugar together, mix with the pulp, cook the milk and gelatine, cool up and also strain into the above; now take a square box mould and fill in the bottom with a qt. of the ice cream then pour in your mixture. Color the other qt. of ice cream a pink strawberry color, flavor and beat it soft so it will pour even on top, do not do this last too quick give the center time to set a little first, then ice and salt up to freeze, then turn it out and repack.

In these above receipts it does not take long to freeze the puddings, 30 minutes to 1 hour is sufficient.

Different ice cream makers often have the name but a different mixture for the goods turned out. Whatever you make, make it good.

NISSELRODE.—1 pint double cream, half pint maroons (chestnuts), 8 oz. powdered sugar, 2 tablespoons vanilla, 3 oz. seeded raisins. 2 oz. sultanas, 2 oz. cetron peel, small teaspoon salt, beat the cream as stiff as possible without buttering it, stir in the

sugar, then vanilla and raisins, cut the citron fine, add a spoon of sugar and beat fine in a mortar, then add and stir all together gently to mix and freeze in a mould.

I think a good brandy flavor improves this, but some object, some prefer a thinner mix, I prefer the above mixture.

PAREE CREAM.—Make a quart brick of New York ice cream, freeze it, have a round mould or square mould to hold 2½ qts., cut the brick so as to form a square in the center of your mould, now make a quart of good tutti frutti ice cream and fill in all around your center piece, ice the top with whipped cream and freeze and repack to deliver.

Mandarin Booms.

Take any desired number of even sized, large choice Blood orange, or oranges, that have a rich looking peeling; take and cut them crosswise in halves, take out the pulp; fill one half with a nice tutti frutti cream and the other half with a good lemon ice. Place the two halves together and set them into the ice case, or packer can, as for any kind of ice cream.

Hokey Pokey.

5C. BRICKS.

There has been quite a number of receipts for hokey pokey but they are very simple to make by taking a medium cheap, or cheap ice cream with a

little more gelatine than for ordinary use, and fill your moulds packing them in plenty of fine ice and salt for one hour. Then dip the mould in water two or three times, then turn them out and cut into desired 5c. blocks; wrap and pack as for ice cream. A suitable tin box mould for this kind of moulding: Ice box 13x2½x2½, or you can use ice cream brick moulds as in the following:

3 gal. of milk, 1½ gal. of cream, 1 gal. of condensed milk, 8 lbs. of sugar, 12 oz. of gelatine, 4 oz. (or more) of vanilla extract. Put the gelatine into a double boiler with 2 quarts of milk to dissolve. Mix the other ingredients and stir them well, then strain in the gelatine. Freeze with a constant speed from start to finish, using 8 pounds of coarse salt to 120 pounds of crushed ice. After starting the machine pile on all the mixed ice and salt you can, and add more as it works down even with the lid. With the machine running at 140 revolutions a minute, this batch should be crowding the lid of your 10-gallon freezer in 12 minutes. Then put on one-half pound of salt and run 3 or 4 minutes longer to stiffen it up ready for moulding. Make up into quart bricks which will cut into eight 5-cent bricks. Pack the bricks in ice and salt, using 6 pounds of salt to each large pail (30 lb. candy pail) of crushed ice. Put half a pail of mixed ice and salt in the bottom of a 10-gallon packer and fill up with bricks, allowing about a foot for ice at the top. Leave stand-

ing for 2 hours at least as the cream to be cut up should be harder than for quart brick delivery.

A 5-gallon packing can will just hold 100 small bricks. Ice up the packer before beginning to cut the bricks, Use waxed paper, 7 by 9 inches, for wrapping. It can be bought in 7-inch rolls and cut off as required.

Take a brick (one at a time) out of the ice pack, give it a turn or two in a pail of cold water, remove the lid and drop the cream onto your cutting board or table. Cut the quart brick into eight pieces, wrap quickly and pack them in the iced up packer.

For moulding a large number I recommend 4-quart or 8-quart bricks. The 4-quart should be kept in the ice and salt for 3 or 4 hours. The larger bricks should be left in the pack overnight; and in this case it is advisable to leave out the plug. These larger bricks are marked so that it is easy to cut them evenly. Split them lengthwise in the center first, then crosswise, then the four lengthwise again and you have 8 1-quart bricks. As these are still to be cut up into smaller bricks and wrapped, you can readily understand that quick work is required.

A special cutter can be made by nailing or bolting blades (cut out of heavy tin or galvanized iron) between strips of wood of the proper width. Such a cutter is good for quick work.

The batch I have given here, frozen as directed, should produce 320 5-cent bricks. The cost, labor not included, varies in different localities, but on the average it will be about 30 cents a gallon. In 100 lots the bricks should bring 3 cents or $9.60 per batch; in 500 lots, 2½ cents or $8 per batch. The margin for labor and profit should never be less than $5 per batch.

Never recommend mixed colors in 5-cent bricks, and never agree to take back unsold bricks; it is always unprofitable.

French Marshmallow Cream.

One-half lb. powdered sugar, 1 qt. double cream, ¼ oz. gelatine, ¼ pt. cream, ½ lb. good marshmallows, ¼ oz. vanilla, ½ lb. English walnuts; beat the cream stiff; dissolve the gelatine in the ¼ pint of cream, cool a little, then put into your gelatine a spoon at a time of the whipped cream and gently stir up the gelatine and continue until you have all in. Roll the nuts and stir them gently in, now cut up the marshmallows in fine pieces and stir them in and the flavor and sugar all together. This may be served plain, or moulded, or in paddy cases.

Different kinds of creams may and are made after the name of the most prominent article used such as caramel ice cream, colored with caramel burnt sugar, bisque powdered macaroons, cocoanut, walnut, coffee, coffee extract, roasted filberts ground fine, raspberry, pineapple, burnt almond, powdered

nectarine fruit, banana, apricot, peach, brown bread, ginger preserved and cut fine, mareschino flavor or cherries, noyan flavor, etc. The same may be said of ices.

Philadelphia ice cream is a cooked custard of cream eggs and sugar.

Delmonico is the same usually using one-third milk instead of all cream.

Some workmen make the above goods under a name to suit their fancy too much so.

Strawberry Flipp.

Take one-half pound tapioca, soak it in water over night then cook it clear. Dissolve one-fourth ounce of gelatine in water to cover it and strain into the tapioca with 8 oz. sugar; stir in 1 qt. preserved strawberries; pack in any mould to suit your fancy. When taken out to repack floor it on an angel food layer cake, slice and place one layer on top, press it down gently, trim off the top for effect sake, and repack for delivery.

India Desert Cream.

For one quart of ice cream, take 6 oz. fine cocoanut dampen just a little, then take a board or a pan sift fine sugar on it and spread the cocoanut on it thin; bake a nice dark brown color in a very hot oven quick; take it out turn it over and repeat. When cold cut it up and run it through a fine chopper for beating into the cream. Color the ice cream a little with burnt sugar; marischino flavor.

Ices.

Different fruit ices are mostly made from a stock ice or body consisting of water, oranges, lemons, sugar, gelatine, glucose and whites of eggs, to much of the latter article and they will not stand good. By adding fruits run through a colander or sieve and sweetened will give you the kind of ice according to the fruits used, so I will give you some first class receipts to go by.

LEMON.—For a 5 gallon batch, 25 lemons, 20 oranges, 6 lb. granulated sugar, 2 oz. glucose, 2 oz. gelatine, 10 qts water, 2 egg whites, small teaspoon tartaric acid. Take the juice of the lemons and oranges add it to the water then the sugar; stir it good to dissolve; dissolve the acid in one-fourth glass cold water and add it; then melt the gelatine in one pint water over heat; add to it the gelatine and stir until melted and strain all into your freezer except the two egg whites and freeze as for ice cream, using more salt when done, beat the eggs with spoon of sugar and beat into the lemon ice.

One gallon batch—8 lemons, 6 oranges, 3 lbs. sugar, one-quarter ozs. gelatine, 2 ozs. glucose, 1 egg white. Proceed as in the 5 gal. batch, after

straining all ingredients into the can, add enough water to make the batch 3 full quarts before freezing.

Other fruit ices are made the same adding from 1 pint to 1 quart of fruit; then water the same.

ORANGE—Make the orange ice exactly the same except you use 20 lemons and 26 oranges and orange flavor.

No 2. If you want a strong flavor of either one of the above take and grate the outside rind of 3 of the fruits wanted, add a large table-spoon of granulated sugar, put all in a mortar and rub down, add one-quarter glass of water, rub good, then strain into your batch.

STRAWBERRY—This can be made either from lemon ice or orange ice by using 4½ gallons of the frozen ice and rubbing 2 quarts of the berries through a sieve or colander and sweeten, then beating it into your ice, or you can freeze up a batch on the same principal, giving it a little color for effect sake.

QUICK METHOD—Now if you have lemon ice in stock and you want to make orange, proceed as follows: Beat in the No. 2 orange flavor until you kill the lemon flavor and add a very little orange color.

STRAWBERRY—Seven-eighths quart of ice, beat in 4 spoons of sweetened berries, a little flavor, then color and ice up. Other small quick orders for fruit ices can be made the same way.

FRUIT ACID—A fine ice of any kind can be made by this receipt. They are just as fine flavored as to use lemons or oranges for them and less work. I recommend this receipt very highly. Take 3 quarts water, 3 sheets gelatine, 4 pounds of sugar or 1¼ quarts of syrup, place of sugar; ¾ oz. fruit acid, or 1 oz. acid to the gallon 4 to 5 lb. sugar to the gallon; 1 quart of fruit extra; or dissolved citric acid in cold water enough to make it taste instead of the fruit acid, one quart of grated pineapple, or 1 quart of any fruit, whites 2 eggs beaten with a spoon of sugar, when frozen beat the whites in with a paddle, dissolve the gelatine in a little water add all together and freeze. The above amount will make close to 2 gallons frozen.

PRUENELL—Beat the yolks of 6 eggs with ½ lb. fine sugar stiff, add the juice of 1 lemon and 1 orange with one-quarter cup of water simmer all until thick, stirring all the time, now beat the whites of 2 eggs with 2 spoons fine sugar until stiff, whipp the 1 st. batch into the last one. Have cut fine 2 oz. Pruenellas, rub them good in powdered sugar and stir into the batch and mould.

Roman Punch.

One quart lemon ice, one-quarter pint good rum. Beat good and ice up.

Mallaga Punch.

Two quarts lemon ice, 2 lbs. grapes, 1½ lbs. fine sugar, 1 teaspoonful caramel, 6 ozs glucose. Take the sugar disso ve the sugar in the glucose with the grape juice, beat into the ice, rub the grapes through a sieve add and beat in, pack good and re-beat several times before sending out.

Frozen Apples.

Take the desired amount of apples pick even sizes and extra large, pare and core with an extra large space to be filled in, bake these tender but not so they will fall down, sifting powdered sugar well over them and a little mace. Have an equal amount of sago well soaked and cook until clear; stir in a little sugar, fill the cores full with this. When a little cool the apples may be touched up with a little red and green color then place in your cabinet well iced and salted. A simple sauce can be served with these if desired.

Frappas.

These are nothing more than any kind of fruit ices such as are already given. Simply frozen to a slush or else packed in a can not frozen to a slush but packed with ice around the can and salt enough to bring the cold up good and cold.

Unfermented Wine Frappa.

This is a large name and a large drink if once tried will rank with the highest frappas made, my wife invented this formula and served it for four hundred Methodist ministers, all of whom had a compliment and the way they drank you would hardly think of a temperance cause. I will give it as she gave it to me. The amount made 13 gallons packed in 3 cans with ice and salt. Juice of seven lemons, juice of 8 oranges, 8 quarts of cherries, 4 1-quart cans of pineapple, 18 lbs. granulated sugar, 1 oz. citric acid dissolved in 1 glass cold water, 4 oz. strawberry flavor, 2 oz. red color. Dissolve the sugar in 1 gallon water over the fire, add all together and bring the amount up to 13 gallons by adding water. The flavor combined I must say was extra fine.

Pineapple Souffle.

Yolks of 4 eggs, 1 tablespoon English arrow root, juice 2 oranges, juice 1 lemon, 1 lb. sugar, ½ oz. gelatine, 1 quart double cream, one-quarter pint water. Dissolve the gelatine in the water beat the cream stiff. Stir the eggs, arrow root and juices over the fire until thick then add the gelatine and when nearly cold gradually add to the whipped cream by lifting the cream up through it. Pack in ice and salt.

Baked Ice Cream Flotunos.

First have a set of irons the shape of small paddy cases. Then have a pan of cooking oil hot. Then make a batter as follows: Two eggs, 1 teacup sugar, one-quarter teaspoon salt, 1 cup of milk, 1 cup of flour. Beat the eggs lightly with the salt and sugar, add the milk and flour and beat all smooth. This will make about 40 cups or cases eadible to fill with ice cream after which sift powdered sugar over the tops. Punch a hole in a piece of sheet iron put the iron over a blaze of fire and you will have a blaze of fire up through the hole. Now quickly turn your box or paddy case of ice cream up side down over the blaze to scorch the sugar or a gas jet can be used to do the work. Now to use the irons in the batter, first heat them in the hot oil, then immerse them in the batter the suitable depth to form the paddy cases, then stick them in the oil to bake a nice color. These irons can be bought of Alfred Andresen & Co., Mfg. So. Minneapolis, Minn.

Charlotte Russe.

This is whipped cream flavored, sweetened and filled in cases to hold a small dish in amount. These are much nicer if packed in an ice cabinet and delivered very cold. Some decorate the tops of each with fruits; they are very pretty and nice.

Another Style Glasses.

Is to fill your cases four-fifths full of any kind of ice cream, then decorate the top with whipped cream and top off with a piece of crystalized fruit.

Whipped Cream.

Take for example 1 pint of old rich double cream, place it in a round bottomed kettle, bowl or pan. And with a wire egg whip beat it up light and stiff. Dissolve gelatine, sugar, flavor and condensed cream can be stirred into the above, or the above can be beaten into ice cream or mixtures to enrich the same. To freeze it simply pack it as for ice cream, at times gently cut down the out-side into the center to make an even freeze of it.

Charlotte Russe.

No 2. Take No. 2 round cutter and cut strips of good cake to fit your individual cases; then line the insides with it and fill in with whipped cream and decorate the tops. These need not be packed in ice.

Fruit Acid.

Dissolve in 1 lb. of water, 1 lb. of the best citric acid and bottle for use.

Brick Ice Cream.

Have a one-quart brick mould, drive a nail through the center of the bottom and hammer down the rough edges, place a piece of paper in the bot-

tom of the mould over the hole, then fill in one-third full of vanilla finish with chocolate fill the mould good and put a piece of paper on top to project all around one-half inch then press on your lid, now to freeze it, throw a half scoop of fine ice in a pail and 1 pint of salt, place your mould in the center a scoop of ice on top mix with a pint of salt cover it over and let it set one hour. To take out dump your pail up side down, take your mould dip it in water 3 or 4 times take off the lid and paper turn it up side down and blow on the hole and the brick will slide out, wrap it in paper and pack it in a 2 quart can as you would so much ice cream. These three colored bricks are called varigated as you see you would have a brick chocolate, white and pink, which can be cut crosswise in any size slices.

Wholesale Bricks.

Now if you are in the wholesale business I advise using a 4 brick size mould and have no less than a half dozen to use for quick work they can be cut into 4 1-quart bricks, these are moulded and frozen almost the same except in proportion more ice and salt. Where you can it is better to mould large bricks late in the afternoon at half past five o'clock; leave the plug out of the freezer over night throwing on more ice and salt and shaking all to settle the ice. In the morning take them out early and pack.

P. S. I advise the use of the Bourbon vanilla made by The Boener Frye Co., of Iowa City, Iowa, Bordens condensed cream and the Michigan Carbon Works gelatine. Now do not pass this advice carelessly for it takes years of experience to find out the firms that make the best goods to obtain the best results. The flavor above mentioned does not freeze out. The color mentioned I never could find fault with, it does not fade The gelatine is extra good, stands up and is of a fine, rich flavor and is not like most all other gelatines it has not got that sticky body after being frozen, and retains the stand up qualities. Talk is cheap sometimes but expensive to the inexperienced buyer. But the practical workman that has tried these goods up against other goods does not have to experiment for they have proven that which I advise.

Packing Bricks.

I advise that each brick should be wrapped with thin paper or white wax paper and they can be packed on top of each other. Always have your cabinet or can well iced and salted up before needing it, so it will be in good cold shape to receive the bricks. Use plenty of salt to pack with the ice.

Individual Fancy Moulding.

For a sample of these goods we will take an individual apple mould, fill each half with yellow cream or pale green colored ice cream. Now put a

cherry or piece of crystalized fruit in one of the halves to represent a case; now close up your mould and squeeze it shut tightly. Take a scoop of ice and three-fourths pint of salt; mix it and throw it in a pail; put your mould down in the center of it to be well covered; now it takes from 15 to 20 minutes to freeze. Then take it out and proceed as for brick moulding.

To paint the apple use Joseph Burnetts Co. red color; weaken a few drops with 10 times as much water. Take a brush and paint one-half of the apple up and down. Now if you used green color for your cream you have a one-half green and the other half red. To decorate the apple stick a clove in the small end and an artificial apple stem with a leaf and flower in the stem end; pack them as you would brick cream.

Variegated Individuals.

These you fill with chocolate, vanilla, strawberry, New York, or Pistach, placing each color in the mould proper to correspond, as white between any two colors and so on.

Fruit Coloring Individuals.

A most delicate effect can be made on painting peaches or pears by the following:

Mould your peaches of a delicate color of yellow; on taking them out of the mould give them a quick dip into some ice water to smooth the cream

for painting. Now have prepared some starch by coloring it a nice pink; use water and color; when it dries rub it through a sieve and box it for use. A green can be made the same way.

Now to paint the pears or peaches take a bit of cotton, touch it into the starch, then gently top one-half of your fruit and you have the desired dull rich color of the fruit. I owe this last information to Mr. Fabricius of the firm of Krell & Co., Davenport, Iowa.

One important thing in taking out and painting individuals is to do a neat clean job. What would disgust your customer more than this in opening up the packer to serve her most admired friends, and find at first sight the individuals, though perfect in make, are covered with dirty finger and thumb prints, while others are stained and daubed through handling from other colors.

Stickers in Individuals.

In freezing lillies or flowers which you must insert petal centers it is best to stick them in immediately when you take them out of the mould, or if you do not it is usually the case after they set hard in the ice case or can packer, then the wires will bend in trying to put them in, so you will likely have to use an awl or small knife blade to first insert a hole, or you may also have to cut off an inch of the wire stem as they bend easily by a little pressure.

Card Moulding.

Cards are on the hard list unless you follow this instruction: Punch a nail hole in the back half center of your mould, and before filling with ice cream, place a small peice of paper over the mould. To take the cream out after it is frozen as in individuals, do not wet the mould more than necessary, or any mould, as it allows the cream to melt and run down and spoil any fine impression.

Mint Julip.

Take 2 quarts of lemon ice frozen; get a double handful of fresh mint leaves; beat and grind them in a mortar with a half cup of good granulated sugar; then add one-half cup of water and masserate good; then strain it into a quart cup, add one-fourth pint good brandy, one-fourth pint good wine; put all into the ice and beat it and pack with plenty of ice and salt. When you cannot get the leaves use peppermint flavor.

Ice Cream Timer.

A simple device for timing your batch while freezing is to take an alarm clock, then a wooden box three inches larger each way than the clock, and lay the face of the clock down on the bottom of the box and mark out a circle; then saw out your circle; next fit your alarm clock in the box just so the face of it will come up even with the outside bottom of

the box; fasten the clock stationary by mixing water with good plaster of paris to a heavy, stiff batter and pour it in around the clock and in four hours it will be firm. Then turn your box over and paste a thick white paper over the bottom, or now it should be called the face; when dry cut out the circle so as to see the clock face, then mark off from 12 o'clock to 1 o'clock, commencing at the first minute dot and numbering it 1, then 2, then 3, then 4, then 5. Duplicate the above by going entirely around the clock, then at each and every number make an awl hole to stick your timer tack in; now wind your clock and set it to going; start up your freezer. It is now just 15 minutes past 7 o'clock. It takes 14 minutes to freeze this cream, so we will set the tack 29 minutes after 7 o'clock and go about our work until time to stop the machine, which we can easily tell by the minute hand going round and pointing to the tack.

I have had old ice cream makers laugh at the idea, and time and again the same men have asked me how long was the cream freezing. If they had timed their batch they would have known as much as I, and would not have been obliged to ask the question.

The timer is a great helper as to letting you know if you are right or wrong as to the proper amount of salt to the ice, more or less, according to the time in freezing. Try it.

Ice Cream Cannon Balls.

Mould some round balls extra hard as for individuals, then melt some sweet chocolate, thin it down with cocoa butter, let it cool until the most of the heat is off; now have two wire forks, drop a frozen ice cream ball into the chocolate, turn it upside down quick, and with your two forks, set it out on your tray, and then immediately in your ice cabinet or iced up can.

Nut balls can be made with ground nuts by dipping the balls in warm water using no chocolate; immediately drop them in crushed nut goodies; wrap in wax paper and place in your ice cabinet to keep hard.

Some Good Flavors.

ARTIFICIAL VANILLA.—For 5 gal. size, 3⅓ oz. vanilla, 1⅔ oz. cumerin, 2½ pt. glycerine, 10 pt. alcohol; add the vanilla and cumerin to the alcohol and let stand over night; then add the glycerine, shake well and let stand until noon; then add water to bring the measure up to five gallons.

VANILLA BEAN EXTRACT.—This can be made from any kind of beans, grinding them fine and putting them in a 1-gal. glass bottle, say 12 oz. of the ground vanilla; pour in on them two quarts of good alcohol, one quart water, one-fourth pint glycerine. It is best to set this in a warm place for 14 days giving it a shaking up once a day, then fill it for use. It can be reduced with one-fourth its amount of water according to strength Now keep the residue of beans, put them back in the bottle and repeat the process which will likely be one-half the strength as the first process Or two kinds of beans may be mixed, or mix it one-half with artificial vanilla.

Perfume Flavoring.

EAU DE ARGENT—1 drhm. oil Cedrat, 3 oz. oil rose cut with ½ pt. rectified spirits.

PERFECT LORE—12 drops oil lemon, 9 drops cloves, 4 drops mace in ½ pt. alcohol.

SHERBERT—1 oz. vani'la, 1 oz. strawberry, 1 oz. pineapple, mix together.

PISTACHIO—5 parts vanilla to 1 of bitter almond, mix together.

CITRONELLA—1 drhm. extract of orange, 1½ drhm. extract of lemon, 6 drops oil cloves, 12 drops coriander, ½ pt. alcohol.

ROOT BEER FLAVOR—One quarter oz. clove extract, 2 oz. ginger extract, 1 oz. allspice extract, one-half oz. cinnamon extract, caramel color, mix all in one-half pint rectified spirits.

CREAM CONELLA—10 drops oil cinnamon, 2 drops oil rose in one-quarter pint spirits.

LOVAGE—Cinnamon, caraway, equal amounts.

EXTRACT OF BEES HONEY—Peppermint 2 oz, attar of roses, 3 oz, spear mint, 3 oz., winter green 2 oz. Mix in a little spirits to cut all. Take one-quarter pound light brown sugar, one-quarter pound glucose, one-half pint water. Dissolve over heat, when cold mix all together.

CREAM DE MINTO—One quarter oz. oil peppermint, one-half pint rum, one quarter pint syrup, one-half pint good wine. This works fine sparingly in tutti frutti or ices.

Shop Floor Cement.

First level slope and hammer down the floor, having plenty of slope for drainage to the sewer; next scatter evenly and beat in coarse sand and gravel, then mix Portland cement well with coarse sand in proportions, half and half. Stir up with water to a good consistency to spread well and spread even and smooth. Do not mix too much at a time. This will set hard in about two days.

Checking System for Tubs.

Hugh Barr, of Barr & Co.—the firm I am working for—has figured out such a simple system for keeping track of the tubs sent out that I think it of interest.

We have all our tubs numbered in series: the quarts run from 1 to 100, the 2-quarts from 101 to 200, gallons from 201 to 300 and 5-gallons from 301 up. In the spring the first packer in each size to go out is given the check No. 1, this number being written under the customer's name on the order book; the second packer check No. 2, and so on. In the packing room we have slates marked off in squares with the numbers of all our packers painted on them, room being left in each square for the check number to be marked in when the order is made ready for delivery.

For example, say that the first 5-gallon order goes out in tub No. 360, check No. 1 is marked under 360 on the slate. When the packer is returned the check number is rubbed out. A glance at the slates will show if any packer has not been returned in a reasonable time, for as the check numbers are constantly changing, a low number—indicating that the packer has been long out—sticks up like a sore thumb. Then it is an easy matter to turn up the order bearing the corresponding number and

get the name and address of the customer holding back the packer.

The accompanying diagrams will give an idea of the way the slates are marked, but I cannot attempt to show all the squares that can be marked off on a slate of ordinary size.

1	2	3	4
			2
5	6	7	8
7			

301	302	303	304
1		4	
305	306	307	308

If it should happen that we forget to erase the check number when the packer is returned, we are soon set right by the packer coming into use again, for it is clear that we cannot enter two check numbers against the same packer number.

When the time comes to take an invoice of packers, the slates show just how many of each size are out and it is the work of but a few minutes to find where they are—or should be.

This system also keeps us informed at all times as to the number of packages of each size delivered since the beginning of the business year or since the last invoice.

I find this the simplest, surest, quickest and most convenient system I have ever tried for keeping track of tubs.

Testing Cream.

I have noticed that from time to time you have inquiry for a simple test for cream. The simplest method I know is to use a lactometer. The instrument will not cost more than 50 or 75 cents.

To be sure of the reading of your instrument it is necessary to prove it in the following manner: Stir your cream well, let the lactometer come to rest in it, and enter the reading (or mark even with the cream) in a book. Then take a 4 ounce sample of the cream and submit it to expert examination. A chemist will not charge much to determine the percentage of butter fat in the sample. Repeat this with 5 or 6 lots of cream, entering the percentage shown by the expert test opposite the corresponding entry for the lactometer. These figures give you a base for calculation. For instance, if the chemist's examination (or a careful test made by yourself) shows that a given lot of cream contains 18 per cent. of butter fat and the corresponding lactometer reading is 60, then you may be sure that when your lactometer registers 60 in another lot of cream it is 18 per cent. cream. With the figures for half a dozen different tests at hand, you can easily determine the percentage of butter fat that corresponds to any reading of the lactometer.

This test may not be absolutely accurate, but close enough for all practical purposes, and it saves a lot of time and bother.

Utilizing Surplus Brine.

A waste of ice is a waste of money and ice used unnecessarily is wasted. I manage to save a considerable quantity of ice by making use of the "waste" brine from my freezers and ice cream storage box to keep my raw cream nearly at the freezing point.

My storage boxes for ice cream and raw cream are set close together, and by means of a hand pump and short piece of hose the surplus brine is transferred from the ice cream box to the raw cream box. A perforated guard, made of galvanized sheet iron, in one corner of the ice cream box allows the pump to go to the bottom. To guard against flooding the cans the box is provided with an overflow four inches below the can tops. The raw cream box has a similar outlet, and as the hose carries the new supply of brine to the bottom of the box the warmer brine at the top flows out and is carried off through the drain pipe.

The brine pumped over at night when I repack the ice cream box keeps the raw cream just as well as if it was iced up in the usual way.

A short hose with a nozzle that fits the overflow of the freezer tub carries the brine into a bucket. This brine, which ordinarily is allowed to es-

cape to the drain, is cold enough to do good service in the raw cream box.

The trouble involved in this utilization of brine that otherwise would go to waste is trifling, and the amount of ice thus saved during a season makes it well worth while.

I notice that nearly all published receipts calling for gelatine in ice cream advise melting it in water. I melt my gelatine in milk or cream and think I get better results. I take a quart of my milk or cream for each four ounces of gelatine and heat them together in a double boiler, stirring the mixture occasionally until all the gelatine is dissolved. It is not necessary or advisable to let the milk come near the boiling point; just let it begin to steam. As soon as the gelatine is dissolved, strain it into your batch.

The batch should not be colder than 40° Fah. when the gelatine is added. If the batch is too cold the gelatine will partially congeal and cling in strings to the spindle and blades of the heater or form streaks in the cream.

A good waterproof apron is necessary to the comfort of workmen, and it is not always possible to buy them when needed. A serviceable waterproof apron may be made by painting 8-ounce duck or canvas with a solution of India rubber. Make the solution by dissolving India rubber in oil of turpen-

tine. A second coat of the solution thinned down with more oil of turpentine will insure a good job and a dry surface.

Another fairly satisfactory method is as follows: Powder separately one pound of sugar of lead and one pound of alum; mix the powders together in a crock and pour on two quarts of boiling water. Let this stand over night. Apply to the canvas with a brush, iron while still damp and hang up for twelve hours. This solution can be kept in bottles and used as required.

Window Add.

Nowadays no one questions the value of window displays, and the necessity for frequent changes is generally recognized; therefore suggestions along this line are not out of place, for what may be an old story to some will probably be new to many.

A display that I have used with good results on several occasions can be arranged at trifling cost of time and money. It took six packers—two each of three sizes—and painted them with extra care with light colored paint. These I filled with sawdust up to within an inch of the top, and arranged them in two rows from near the back center of the show window to the front sides. On the sawdust I set newly tinned can lids of the proper sizes and filled in with lump alum to represent ice, not covering the lids completely. (Usually I was able to bor-

row the alum from a nearby druggist, and so saved that expense). Then I had neatly lettered cards, graduated in size to correspond with the packers, calling attention to our various creams and ices, referring to our methods, manner of delivery and time required to fill ordinary and special orders, and giving prices on standard products. In the center of the window I placed a small heap of individual moulds of various sorts. Those nearest the front I opened out and laid in composition forms, correctly tinted to show the effect we could get with different creams. Back of the moulds was a placard about our fancy moulded creams, and giving the prices per dozen for individuals.

A display of this sort is more striking and effective than one would imagine. However, I never let mine stand for more than a week or ten days, because I didn't want people to get in the way of passing the window without looking in—and they won't look in more than a few times unless you give them something new to look at.

Another good display, particularly on a very hot day, is a single large block of clear ice into which fruits or flowers have been frozen, or several small blocks each holding a single rose or bright colored fruit. For the large block it is, of course, necessary to call upon a manufacturer of artificial ice, but small blocks you can make yourself with very little trouble.

Take a rose with two or three green leaves on the stem and fix it in the center of a 2-quart mould, using a bit of wax to secure it. Fill the mould overfull with clear water (distilled water is best) and drop in five or six drops of strong alum solution. Put on a tight fitting cover and rub some lard into the joint to make it water tight. Put about two inches of fine ice and a cup of salt in the bottom of a pail and set the mould in carefully, then fill up the pail with fine ice using plenty of salt. After this the pail must not be moved or shaken or your ice block will freeze rough or cloudy. At the end of an hour and a half, lift the mould out with great care and repack as before, then let it stand another two hours. Plunge the mould into lukewarm water for an instant and your ice block will slip out easily.

Square up a block of ice somewhat larger than your show piece, wrap it in several thicknessses of waxed paper and place it in a pan in the window. Cut out the paper on the top to the proper size and set your show piece on the larger ice block. This will prevent rapid melting.

These small blocks will not last long in very hot weather—a few hours at most—but they are very pretty and attractive while they do last and more than pay for themselves through the attention they attract—for of course you would show something saleable at the same time and use placards in the usual way.

Ninety-five Pointers.

Make it a rule to freeze as regular each day as possible, at the same time crowding the amount on Fridays and Saturdays as they are usually the heaviest days in the week.

It is better to have extra frozen cream on hand than to run out or run short if some small accident should occur.

I do not recommend the making of two grades of ice cream.

On the 4th of July only, a firm could send his customers notice that if they wanted a grade of good second-class cream at a lower price by sending in their order stating exactly the amount they wanted, it would be done through an accommodation providing the order came into the office not less than three days before the time wanted.

By no means agree to take back ice cream except at a big per cent. off.

It is the boss' or proprietor's right to, once in a while, lift up the can lid and take a peep. You may be pleased; you may be displeased.

A good rule is to place a sheet of wax paper over your cream can before putting on the lid for shipping.

In the early spring, or closing of winter, is a good time to scrape up all your tub packers, then look them over and sort out those needing to be re-hooped. This you can easily do by buying the needed amount of hoop wire, rivets, a punch and a hammer. Then the next step is to paint over all your packers. Try not to imitate some competitor's colors, as this looks bad or appears you are weak to stand on your own colors.

As a rule it takes 120 lbs. of ice or nine scoop shovels of ice to freeze a 10-gallon batch of ice cream and 45 to 55 lbs. of ice to pack it. If freezing only one batch, then the ice can be used from the freezer to pack the frozen cream with. Then it takes 145 lbs. of ice, all told, to freeze and pack it. But in continuous freezing there is a great saving of ice.

Draw off and use the bottom of your raw cream for mixing in gelatine; it is the thinest and contains less butter fat.

Do not freeze or work too hard a frozen cream.

In freezing cream that is over long in coming up, be careful it has not already come up and dropped down on you.

Never crush more ice than you need; it's a waste of ice and labor.

Instead of leaving something to be finished to-morrow, do it now. Then start to-morrow's work if possible. It's a heap easier to keep things going right when you are ahead of the schedule.

To guess at it is to make a failure. Weighing or measuring everything used, insures good results.

Changing a formula before trying it is bad practice. Even if the formula doesn't seem just right to you, remember that the man who worked it out probably knew what he was about.

You'll generally find that the man who thinks he knows it all can quote his grandmother's cook book word for word, but he doesn't know the first thing about the methods of to-day. Also you'll generally find him holding down a cheap job.

When a man gets too old or too smart to learn a little every day, it's time for "the boss" to hang out a "help wanted" sign.

Treat your customers the very best possible but by all means run your own business.

If a man can't pay a small bill, is it not harder for him to pay a larger.

My experience is, as a rule, no credit to Greeks.

Would you be up-to-date in business, then read all the trade journals in your line, especially the New York Ice Cream Journal.

Round Mould With a Heart Center.

These moulds are supplied by any supply house. They consist of two lids, one drum, one heart center and one round lid with a heart cut out of the center. To fill the mould first take a piece of wax paper and put on one end of the drum, then a lid over and on it. Set it down with the open end up. Now place in your heart mould in the center; have some extra soft vanilla cream, with this you fill a paper funnel, folding in the top, cutting off the small end and filling around your heart with it by holding the top and squeezing out the cream.

When filled do likewise with some strawberry cream and fill the heart, then put on the lid with the hole in and put a heart shaped stick in the heart. Someone must hold down the stick solid while you pull out the heart mould, thereby leaving the cream in the center. Now place a paper on, then the lid, and freeze as in any brick work.

Another way is to have small heart moulds, fill them and freeze; then push them out, set them in the center of your round mould and put vanilla cream around them; refreeze the whole brick. After one hour and a half it is ready to take out same as any brick.

To deliver ice cream for the fountain trade or city store trade, it is well to deliver the cream in a packer and can somewhat larger than the amount ordered. For example: 2 quarts in a gallon can, 1 gallon in a 6-quart, and so on; it keeps better for your customer and gives better satisfaction. But I do not recommend this for private parties.

There is more money in continuous freezing than one or two batches at a time.

In case the cogs wear small on your machine and you wish to raise your machine closer, screw a wide, thick hoop of iron around the bottom of your freezer tub allowing it to project the correct heighth to do the work.

A man must learn to be and know the ripeness, age and per cent. of butter fat in cream to be a successful freezer.

A 10-gallon or 40-quart freezing can measures 23 in depth. One inch from the top in measuring cream is 10 gallons. So with a rule to can, estimate how short your batch of cream is, if any.

Keep tally each day of every article used in the shop.

If you are starting a factory, allow room and power for an extra machine—and put in the extra machine for emergencies. It will pay. A single days run will pay interest on extra investment for a year—and it need not be a very big day's run at that.

Usually it is hard to get an opinion out of a poor workman unless he's a fool as well, but he will look wise as an owl when others are talking. A good workman is never afraid to say what he thinks and he is always ready to swap ideas.

One hundred penny scraps make a dollar's worth of useful material.

If you always use the best of everything you have on hand you'll accumulate an expensive surplus of pretty poor materials.

Don't buy anything you can't use—then be sure you use everything you buy. That's true economy.

Never transfer hard cream; it will lose from 10 to 20 per cent. in bulk. Have plenty of 2-gallon, 3 gallon and 5 gallon cans to accomodate your wholesale trade and transfer direct from the machine can. Keep them in storage tanks.

Don't freeze your cream too hard, or you will get only nine gallons instead of ten, and by the time you have transferred it you will have only eight.

Plain all cream mixtures are likely to require repaddling after standing for two hours, especially if light cream is used, and repaddling causes shrinkage as a rule. A properly proportioned mixture of cream and condensed milk requires no repaddling.

Use old ice for storing cream; new ice for shipping and delivery.

Never allow a substitute to replace a reliable article that has always given satisfaction. Reducing cost may prove expensive in the long run.

Articles that will not stand all your tests are seldom offered on trial.

Instruct drivers to draw off a little of the brine from small packers delivered at distant points on the route.

It pays to use wooden covers on small packers in hot weather.

In July and August try sending out your quarts in 2-quart packers. Your customers will be better satisfied.

Old cream beats up quicker than new cream; therefore the freezing should be hastened by increasing the proportion of salt.

Never wear rubber boots in the shop but leather shoes with wooden soles, and have two pair to change off with. Also wear yarn socks for health sake.

Be kind to your boss. Boss be considerate with your men.

Pasteurized cream should be well aged before it is used; otherwise you will find it difficult to get the expected swell.

Packers should be iced up five or ten minutes before cream is transferred to them from the freezer.

Always make the best goods you can for the price; and keep your price at the top notch even against competition. Cut prices may catch some floating trade; quality is the magnet that attracts and holds.

Never contract a job to be let without getting an estimate as to the cost first.

If you have cream left over from your last mixing. Keep it separate and freeze it up first.

When cream beats out around your freezer lid it is a good sign your cream is coming up fast and good.

Lift up one side of your freezer. Kick a piece of ice under it then it will slide easily from your machine and save labor.

You can make up your mixing for freezing the next day before leaving the shop at 6 o'clock. Pack it well with plain ice no salt sides and top. In the morning give it a little stirring to mix and go ahead.

"But in rainy weather look out for the above."

After some freezers cans have been in use some time they stick and are hard to get off. Then fill and hammer the can rim smooth.

Old copper freezing cans often need retinning.

If you have just frozen a batch of strawberry ice cream and you now want to freeze a vanilla, do not take your can out and wash it, but take a cardboard and scrape it clean. Do this immediately on transferring your strawberry and save time and ice.

Always pour a quart of water on your freezer lid before taking it off.

Keep your mixing vat, storage cans and all, perfectly clean; it pays.

Good true machinery runs smooth with little noise. If you find a defect try to fix it at once.

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1 or 2-gallon cans are handy to mix and heat your gelatine and cream in by setting them in the water over the fire.

Give your wheel a turn when you throw on your belt; saves loosening it.

Salt melts ice and gives to it the freezing power. Use good judgment in its use accordingly.

Only give cream a hard freeze when you are compelled to ship it from the freeze on account o shortage.

When your cream transfers from the bottom of your freezer too hard, you have either let it set too long or you are using a little too much salt in freezing it.

You can cook the gelatine too long in melting it, so it is likely to curdle or lump somewhat; when it shows smooth it is done.

Be careful to melt gelatine always in sweet cream, or else it is likely to curdle.

Have you a stubborn helper? If you can't change him let him go.

Do not color or flavor too highly.

Send out all statements promptly. No one else will look after your business as a rule.

I condemn iron sockets for p'ugs in packers. A plain bored hole is best; if the hole wears larger, use a larger plug.

Cream 16 to 18 per cent. butter fat will stand one-fourth to one-half ounce more gelatine than cream will that contains 20 per cent.

Have a system in your shop, and a place for each article.

Aim to keep ahead of your work.

If you forget and leave out your freezer plug in freezing a batch use more ice and salt, and run it a few minutes longer or else your cream is likely to be too soft.

Do not repack orders too soon before the time of delivery.

The heavier and thicker the mixings to be frozen, the greater the speed needed.

Always keep the belts tight. If it slips from one side of the pulley to the other tighten it up.

Do not use too narrow a belting according to the size of your pulleys.

Off brands of poor sugar makes poor ice cream; use good granulated.

Leave a barrel of salt in the center of the shop for use.

Save all salt sacks to cover up with or to be sold.

It is more saving to buy all salt in sacks.

Keep gelatine covered in a dry place.

It takes 47 lbs. of ground ice to a packer and 3 to 4 lbs. of salt.

Have paper cut different sizes ready to wrap bricks with, and for moulding, labelled and in a box separate.

A few gallons of simple syrup kept on hand is a good idea.

A hard, clear frozen ice is preferable in freezing and packing.

Cream butters in freezing it too hard; will not butter if taken when frozen proper.

Two particular things: Old, rich cream and plenty of speed.

The best 5-gallon wooden packers have no iron bungholes; are heavy; and measure 18 inches across the top, 16½ inch bottom, and full one-inch lumber.

Crowding ground ice under your ice crusher dulls it.

Paint all your packer tubs early in the spring or during the dull winter months. Also number them.

The handiest can opener is a small hatchet.

Sal soda is best to use in water for washing cans.

A little belt dressing is not bad at times. Also oil once a week for the machinery.

It is worth the while of any ice cream maker to study the business well from the ground up. He will get his reward in the satisfaction of knowing he can handle his trade to perfection, and also it will bring him the dollars and cents.

My Last Receipt.

1 lb. of Tincture of Resolution.
¼ lb. Common Sense.
½ lb. Experience.
1 Sprig of Time.
¼ lb. Cool Breeze.
¾ lb. Patience.
2 lbs. Perseverance.

Mix all, and may you have the greatest of success.

Yours,

VAL MILLER,

DAVENPORT,

IOWA.

Or

MAQUOKETA,

IOWA.

What Freezers to Use.

I have so often been asked "What is the best make of freezers to use," so I will give you my experience.

If you want a brine freezer by all means write to and buy the C. & B. Supply Co.'s, Chicago, Ill, freezer. This machine is self-discharging, makes smooth cream, and its doubling up the amount to be frozen in freezing, will soon pay for itself. Write them for descriptive booklet.

If you want a salt and ice freezer you may look the world over and you can't find a better made, better working freezer than the C. B. Supply Co.'s, Chicago, Ill. You will also find everything to be used in the ice cream business; they handle all of which is the best that can be produced, by experience.

If you are in need of any first-class candy receipts with full directions for working the same, three of the following receipts with all the instructions will be forwarded to you on receipt of fifty cents:

Stick Candy.
Lemon Drops.
Hoarhound Squares.
Iceland Moss Squares.
Wrapped Butter Scotches.
Dropped Butter Scotches.
Peanut Slab.
New England Peanut.
Machine Peanut Drops.
Cocoanut Slab.
Cocoanut Brittle.
Peanut Brittle.
White Taffy.
Molasses Taffy.
Old-fashioned Molasses Stick Candy.
New England Walnut.
Taffy Cut Goods.
Cream Almonds.
Sugar Peanuts.
Jap Cocoanut Squares.
Cocoanut Brilliants.
Molasses Jap.
Cordial Drops.
Stand-up Caramels.
Wrapped Caramels.
Chocolate Dip Caramels.
Chocolate Drops.
Paddy Cream.
Paddy Mint Wafers.
Old-fashioned Butter Cups.

Cocoanut Kisses.
Cocoanut Cream Squares.
Fudges.
Italian Cut Cream.
Spider Web Birds Nest.
Honey Nouga.
Lemon Trinkets.
Marsh Mallows.
Cubian Chocolate Nouga.
Popcorn Cut Bricks.
Popped Rice Crackerjack.
Boston Shavings.
Fruit Drops,
Fancy Cocoanut Jap Cream Squares.
Crackerjack.
Popcorn Slab.
Broken Mix Candy.

Or any 7 of the above receipts for $1.00. As I have made thousands of pounds of the above candies and can give you the best of receipts. Address

VAL MILLER,
DAVENPORT,
IOWA.

Would you be a first-class, well read general work man on ice cream and candy; if so, take and read these papers.

Ice Cream Trade Journal, 150 Nassau St., New York.

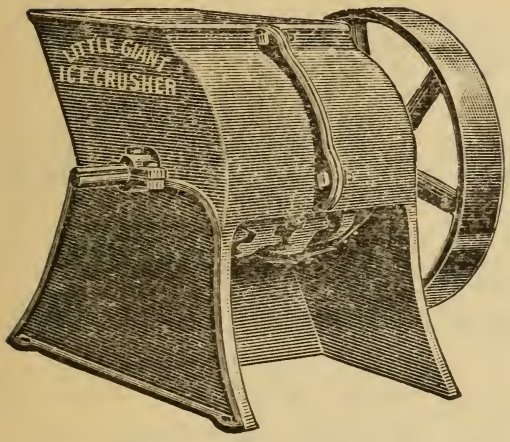
The Confectioner and Baker, 85 Washington St., Chicago.

The Soda Fountain, 90 Williams St., New York.

The Confectioners Journal, 627 Walnut St., Philadelphia, Pa.

They are not promotors to the mind only, but to the pay envelope every Saturday or Monday night.

VAL MILLER.



Little Giant Ice Crushers

Are built on the right principle to do the work easily, quickly and to give years of service. They cut the ice and do not crush or mash it, therefore, no snow or powdered ice.

Considering the years of service they render they are not expensive. Simply divide the cost price by ten (the majority of machines will last twice that long) and you have the average yearly cost. What is so small an amount compared to the saving and convenience?

Let us send you one for trial. If not satisfactory in every way, simply return it. We pay freight both ways. You can't lose a penny.

Write for catalog and prices of entire line; eleven sizes.

DAVENPORT ICE CHIPPING MACHINE CO.,

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MANUFACTURERS OF
.....HIGH GRADES.....

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Iowa City, Iowa.

If you have ever ordered goods from the above firm, you will need no recommend.

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We can say for

...Our Condensed Milk...

for ice cream purposes is that we are selling to the best ice cream makers in this section, and their continued patronage would indicate that the goods suited them.

Our Prices are Reasonable.

Iowa Condensed Milk Co.,

WEST LIBERTY, IOWA.

I have used the above milk for three years and can recommend it.—VAL MILLER.

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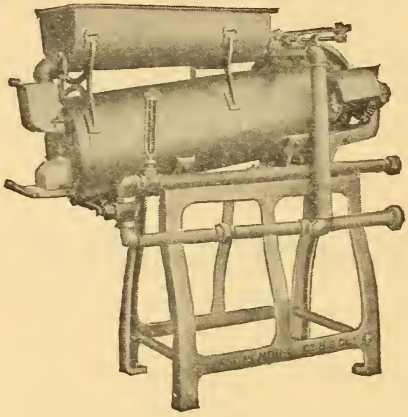

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